Aanderud, Z.T., Richards, J.H., Svejcar, T., James, J.J., 2010. A shift in seasonal rainfall reduces soil organic carbon storage in a cold desert. Ecosystems 13, 673–682

Aerts R., 1997. Climate, leaf litter chemistry and leaf decomposition in terrestrial ecosystems: a triangular relationship. Oikos 79: 439−449

Ahlstrom A, Raupach MR, Schurgers G et al. (2015), The dominant role of semi-arid ecosystems in the trend and variability of the land CO2 sink. Science, 348 (6237), 895–899.

Allen, C.D., Macalady, A.K., Chenchouni, H., Bachelet, D., McDowell, N., Vennetier, M., Kitzberger, T., Rigling, A., Breshears, D.D., Hogg, E.H.T., Gonzalez, P., Fensham, R., Zhang, Z., Castro, J., Demidova, N., Lim, J.H., Allard, G., Running, S.W., Semerci, A., Cobb, N., 2010. A global overview of drought and heat-induced tree mortality reveals emerging climate change risks for forests. Forest Ecology and Management 259, 660–684

Amundson R., 2001. The carbon budget in soils. Annu Rev Earth Planet Sci 29: 535−562

Austin, A.T., Ballaré, C.L., 2010. Dual role of lignin in plant litter decomposition in terrestrial ecosystems. PNAS 107, 4618−4622

Austin, A.T., Yahdjian, L., Stark, J.M., Belnap, J., Porporato, A., Norton, U., Ravetta, D.A., Schaeffer, S.M., 2004. Water pulses and biogeochemical cycles in arid and semiarid ecosystems. Oecologia 141, 221–235

Bala G., 2013. Digesting 400 ppm for global mean CO_2 concentration. Current Science. 104 (11): 1471–1472.

Balagopalan M., Jose A.I., 1991. Effect of tree species on soil properties along a transect through teak, eucalypt and rubber in Kerala - Teak: Proceedings International Teak Symposium. 1991

Ballantyne A.P., Alden C.B., et al., 2012. Increase in observed net carbon dioxide uptake by land and oceans during the past 50 years. Nature 488, 70–72

Bashkin, M., Binkley, D., 1998. Changes in soil carbon following afforestation in Hawaii. Ecology 79 (3), 828−833

Batjes N.H., 1996. Total carbon and nitrogen in the soils of the world, European Journal of Soil Science. 47, 151-163.

Becknell, J.M., Kucek. L.K., Powers. J.S., 2012. Aboveground biomass in mature and secondary seasonally dry tropical forests: A literature review and global synthesis. Forest Ecology and Management 276, 88–95

Benítez P.C., McCallum, I., Obersteiner, M. and Y. Yamagata., 2007. Global potential for carbon sequestration: Geographical distribution, country risk and policy implications. Ecological Economics , 60, 572-583.

Berg B., 2000. Litter decomposition and organic matter turnover in northern forest soils. Forest Ecol manage 133: 13−22

Berthelot,M., P. Friedlingstein, P. Ciais, P. Monfray, J.L. Dufresen, H.L. Treut and L. Fairhead, 2002. Global response of the terrestrial biosphere and CO_2 and climate change using a coupled climate-carbon cyclemodel. Global Biogeochem. Cy., 16, 10.

Bijalwan, A., Swamy. S.L., Sharma, C.M., Sharma, N.K., Tiwari, A.K., 2010. Land-use, biomass and carbon estimation in dry tropical forest of Chhattisgarh region in India using satellite remote sensing and GIS. Journal of Forestry Research 21 (2), 161 – 170

Booker, F.L., Anttonen, S., Heagle, A.S., 1996. Catechin, proanthocyanidin and lignin contents of loblolly pine (*Pinus taeda* L.) needles after chronic exposure to ozone. New Phytologist. 132, 483−492.

Brown, S., 1997. Estimating biomass and biomass change of tropical forests: a primer. UNFAO Forestry Paper 134. pp. 38-49 Rome, Italy.

Brown, S., and Gaston, G., 1996. Tropical Africa: Land use, biomass and carbon estimates for 1980. (R.C. Daniels, editor). ORNL/DCIAC-92, NDP-055. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tennessee.

Brown, Sandra L., Paul Schroeder, and Jeffrey S. Kern., 1999. Spatial distribution of biomass in forests of the Eastern USA. Forest Ecology and Management 123:81-90.

Buringh P., 1984. Organic carbon in soils of the world, The Role of Terrestrial Vegetation in the Global Carbon Cycle: In Measurement by Remote Sensing (Eds. Woodwell G.M). SCOPE. Published by John Wiley & Sons Ltd. 91-109.

Cairns, M.A., Olmsted, I., Granados, J., Argaez, J., 2003. Composition and aboveground tree biomass of a dry semi-evergreen forest on Mexico's Yucatan Peninsula. Forest Ecology and Management 186, 125–132

Carlile M.J., Watkinson, S.C. and G.W. Gooday, 2001. The Fungi. Academic Press, London, UK. pp.588.

Census of India, Ministry of Home Affairs, Government of India: http://www.censusindia.gov.in; http://www.censusgujarat.gov.in; http://www.census2011.co.in

CENTURY, model 4.0, http://www.nrel.colostate.edu/projects/century/

Chabbra, A., Palria, S., and Dadhwal, V. K., 2002. Growing stock-based forest biomass estimate for India. Biomass and Bioenergy 22, 187-194.

Chabbra, A., Palria, S., and Dadhwal, V. K., 2002. Spatial distribution of phytomass crabon in Indian forests. Global Change Biology 22, 1230-1239.

Chaturvedi, R.K., Raghubanshi, A.S., Singh, J.S., 2011. Carbon density and accumulation in woody species of tropical dry forest in India. Forest Ecology and Management 262, 1576–1588

Chave, J., Andalo, C., Brown, S., Cairns, M.A., Chambers, J.Q., Eamus, D., Folster, H., Fromard, F., Higuchi, N., Kira, T., Lescure, J.P., Nelson, B.W., Ogawa, H., Puig, H., Riera, B., Yamakura, T., 2005. Tree allometry and improved estimation of carbon stocks and balance in tropical forests. Oecologia 145, 87–99

Chave, J., Condit, R., Lao, S., Caspersen, J.P., Foster, R.B., Hubbell, S.P., 2003. Spatial and temporal variation of biomass in a tropical forest: results from a large census plot in Panama. Journal of Ecology 91, 240–252

Chen C.R., Z. H. Xu, and N. J. Mathers, 2004. Soil carbon pools in adjacent natural and plantation forests of subtropical Australia. Soil Science Society of America Journal, 68, 282-291.

Chhabra, A., Dadhwal, V.K., 2004. Assessment of major pools and fluxes of carbon in Indian forests. Climatic Change 64, 341–360

Ciais P., Schelhaas, M.J., Zaehle, S., Piao, S.L., Cescatti, A., Liski, J., Luyssaert, S., Le- Maire, G., Schulze, E.D., Bouriaud, O., Freibauer, A., Valentini, R. and J. Nabnuurs, 2008. Carbon accumulation in European forests. Nature Geoscience, 1, 425-429.

Condit, R., Engelbrecht, B.M.J., Pino, D., Pérez, R., Turner, B.L., 2013. Species distributions in response to individual soil nutrients and seasonal drought across a community of tropical trees. PNAS, 110 (13), 5064-5068

Conti, G., Díaz, S., 2013. Plant functional diversity and carbon storage – anempirical test in semi-arid forest ecosystems. Journal of Ecology 101, 18–28

COP21, http://www.cop21paris.org/

Cornelissen JHC, Pérez-Harguindeguy N, Díaz S, Grime JP, Marzano B, Cabido M, Vendramini F, Cerabolini B., 1999. Leaf structure and defense control litter decomposition rate across species and life forms in regional floras on two continents. New Phytol 143: 191−200

Cornwell WK, Cornelissen JHC, Amatangelo K, Dorrepaal E, Eviner VT, Godoy O,

Hobbie SE, Hoorens B, Kurokawa H, Pe´rez-Harguindeguy N, Quested HM, Santiago LS, Wardle DA, Wright IJ, Aerts R, Allison SD, Bodegom P, Brovkin V, Chatain A, Callaghan TV, Dı´az S, Garnier E, Gurvich DE, Kazakou E, Klein J.A, Read J, Reich PB, Soudzilovskaia NA, Vaieretti MVV, Westoby M., 2008. Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecol Letters 11: 1065−1071

Couteaux MM, Bottner P, Berg B., 1995. Litter decomposition, climate and litter quality. Trends Ecol Evol 10 (2): 63−66

Cramer, W., A. Bondeau, F.I. Woodward, I.C. Prentice, R.A. Betts, V. Brovkin, P.M. Cox, V. Fisher, J.A. Foley, A.D. Friend, C. Kucharik, M.R. Lomas, N. Ramankutty, S. Sitch, B. Smith, A. White, and C. Young-Molling, 2001: Global response of terrestrial ecosystem structure and function to CO_2 and climate change: results from six dynamic global vegetation models. Global Change Biology. 7 (4), 357–373.

Dadhwal V.K., 1998. Carbon cycle for Indian forest ecosystem: a preliminary estimate. Global Change Studies, 1998

Dadhwal V.K., Nayak S.R., 1993. A preliminary estimate of biogeochemical cycle of carbon for India - Science and Culture, 1993

Dadhwal V.K., Shah A., 1997. Recent changes in forest phytomass carbon pool in India estimated using growing stock and remote sensing based forest inventories. Journal of Tropical Forestry, 1997

Dan-Dan, W., Xue-Zheng, S., Hong-Jie, W., Weindorf, D.C., Dong-Sheng, Y., Wei-Xia, S., Hong-Yan, R., Yong-Cun, Z., 2010. Scale Effect of Climate and Soil Texture on Soil Organic Carbon in the Uplands of Northeast China. Pedosphere 20(4), 525–535

Das, D.K., Chaturvedi, O.P., Mandal, M.P., Kumar, R., 2008. Effect of tree plantations on biomass and primary productivity of herbaceous vegetation in eastern India. Tropical Ecology 49 (2), 95 – 101

Davidson, E.A., Janssens, I.A., 2006. Temperature sensitivity of soil carbon decomposition and feedbacks to climate change. Nature 440 (9), 165-173

Degryze, S., Six, J., Paustian, K., Morriss, S.J., Paul, E.A., Merckx, R., 2004. Soil organic carbon pool changes following land-use conversions. Global Change Biology 10, 1120−1132

Demoling, F., Figueroa, D., Baath, E., 2007. Comparison of factors limiting bacterial growth in different soils. Soil Biology & Biochemistry 39, 2485–2495

Dinakaran J, Krishnayya NSR, 2010. Variations in soil organic carbon and litter decomposition across different tropical vegetal cover. Curr Sci 99 (8): 1051−1060

Dinakaran, J., Krishnayya, N.S.R., 2008. Variations in type of vegetal cover and heterogeneity of soil organic carbon in affectingsink capacity of tropical soils. Current Science, 94(9) 1144 – 1150

Dinakaran, J., Krishnayya, N.S.R., 2011. Variations in total organic carbon and grain size distribution in ephemeral river sediments in western India. International Journal of Sediment Research 26 (2), 239–246

Diochon A, Kellman L, Beltrami H., 2009. Looking deeper: An investigation of soil carbon losses following harvesting from managed northeastern red spruce (Picea rubens Sarg.) forest chronosequence. Forest Ecol Manage 257: 413−420

Dixon R.K., Solomon, A.M., Brown, S., Houghton, R.A., Trexier, M.C. and J. Wisniewski, 1994. Carbon pools and flux of global forest ecosystems. Science, 263, 185-190.

Don, A., Schumacher, J., Freibauer, 2011. Impact of tropical land-use change on soil organic carbon stocks – a meta-analysis. Global Change Biology 17, 1658 – 1670

Ehleringer J.R., Buchmann N., Flanagan L.B., 2000. Carbon isotope ratios in belowground carbon cycle processes. Ecol Appli. 10(2): 412–422

Ehlersa I., Augustia A., Betsona T.R., Nilssonb M.B., Marshallb J.D., and Schleuchera J., 2015. Detecting long-term metabolic shifts using isotopomers: CO_2-driven suppression of photorespiration in C_3 plants over the 20th century. PNAS 112 (51): 15585–15590.

Feldpausch, T.R., Lloyd, J., Lewis, S.L., et al., 2012. Tree height integrated into pantropical forest biomass estimates. Biogeosciences 9, 3381 – 3403

Field manual 2008, NVCPA project, IIRS-NRSC, ISRO Geosphere Biosphere Programme).

Fontaine, S., Barot, S., Barre, P., Bdioui, N., Mary, B., Rumpel, C., 2007. Stability of organic carbon in deep soil layers controlled by fresh carbon supply. Nature 450, 277 – 280

Forest Survey of India (FSI), Ministry of Environment and Forest: http://www.fsi.org.in; http://fsi.nic.in/

Forests and Environment Department, Government of Gujarat: http://www.envforguj.in

Gairola JJ, Woodcock P, Edwards FA et al., 2014. Cheap carbon and biodiversity cobenefits from forest regeneration in a hotspot of endemism. Nature Climate Change, 4, 503–507.

Giardina C.P. and M.G. Ryan, 2000. Evidence that decomposition rates of organic carbon in mineral soil do not vary with temperature. Nature, 404, 858-861.

Gibbs, H.K., Brown, S., Niles, J.O., Foley, J.A, 2007. Monitoring and estimating tropical forest carbon stocks: making REDD a reality. Environmental Research Letters 2, 045023

Go´Mez-Aparicio L., Garci´a-Valde, R.S.W., Rui´Z-Benito, P., Zavala, M.A., 2011. Disentangling the relative importance of climate, size and competition on tree growth in Iberian forests: implications for forest management under global change. Global Change Biology 17, 2400–2414

Gopalakrishnan, R., Jayaraman, M., Bala, G., Ravindranath, N.H., 2011. Climate change and Indian forests. Current Science 101 (3), 348 – 355

Grandy, A.S., Strickland, M.S., Lauber, C.L., Bradford, M.A., Fierer, N., 2009. The influence of microbial communities, management, and soil texture on soil organic matter chemistry. Geoderma 150, 278–286

Gujarat Forest Statistics, 2010-2011. Compiled by project planning, monitoring & evaluation cell, Principal Chief Conservator of forests & head of the forest force Gujarat state, Gandhinagar.

Gujarat State Agricultural Marketing Board, Government of Gujarat: http://agri.gujarat.gov.in

Guo, L.H., Gifford, R.H., 2002. Soil carbon stocks and land use change: meta analysis. Global Change Biology 8, 345-360

Haberl, H., Er, K.H., Krausmann, F., Gaube, V., Bondeau, A., Plutzar, C., Gingrich, S., Lucht, W., Fischer-Kowalski, M., 2007. Quantifying and mapping the human appropriation of net primary production in earth's terrestrial ecosystems. PNAS 104 (31), 12942 – 12947

Hattenschwiler S., Tiunov, A.V. and S. Scheu, 2005. Biodiversity and litter decomposition in terrestrial ecosystems. Annual Review of Ecology, Evolution and Systematics , 36, 191-218.

Hofhansl F, Schnecker J, Singer G, Wanek W., 2015. New insights into mechanisms driving carbon allocation in tropical forests. New Phytol., 205, 137–146.

Holdridge LR (1947) Determination of world plant formations from simple climatic data. Science 105: 367–368

Hoover, C.M., Birdsey, R.A., Heath, L.S., Stout, S.L., 2000. How to estimate carbon sequestration on small forest tracts. J. For. 98, 13–19.

Houghton, R.A. 2005. Aboveground forest biomass and the global carbon balance. Global Change Biology 11, 945–958

Houghton, R.A., 2003. Revised estimates of the annual net flux of carbon to the atmosphere from changes in land use and land management 1850-2000. Tellus, 55B, 378 – 390

http://climate.nasa.gov/

http://gstfc.gujarat.gov.in

http://gujaratflora.com/

http://science.nasa.gov/

http://soilcarboncenter.k-state.edu/carbcycle.html

http://www.gsbb.in/gujarat-biodiversity.php

http://www.ipcc.ch/ipccreports/sres/land_use/index.php?idp=3

Huber M. and Knutti R., 2012. Anthropogenic and natural warming inferred from changes in Earth's energy balance. Nature Geoscience 5, 31–36

Indian Meteorological Department (IMD), Ministry of Earth Sciences, Government of India: http://www.imd.gov.in

Jaramillo, V.J., Kauffman, J.B., Renteria-Rodriguez, L., Cummings, D.L., Ellingson, L.J., 2003. Biomass, carbon, and nitrogen pools in Mexican tropical dry forest landscapes. Ecosystems 6, 609–629.

Jha, P., Mohapatra, K.P., 2010. Leaf litterfall, fine root production and turnover in four major tree species of the semi-arid region of India. Plant Soil 326, 481–491

Jobbaggy, E.G, Jackson, R.B., 2000. The vertical distribution of soil organic carbon and its relation to climate and vegetation. Ecological Applications 10 (2), 423-436

Jobbaggy, E.G., Jackson, R.B., 2001. The distribution of soil nutrients with depth: Global patterns and the imprint of plants. Biogeochemistry 53, 51-77

Johnson N.C. and D.A. Wedin, 1997. Soil carbon, nutrients, mycorrhizae during conversion of dry tropical forest to grassland. Ecological Applications , 7(1), 171-182.

Kale, M. P., Singh, S., and Roy, P. S., 2001. Satellite Remote Sensing (IRS-WiFS) for Estimating Intercepted Photosynthetically Active radiation in Tropical Forest Ecosystem. Asian Journal of Geoinformatics 2.

Kauffman JB, Hughes RF, Heider C, 2009. Carbon pool and biomass dynamics associated with deforestation, land use, and agricultural abandonment in the neotropics. Ecological Applications, 19(5), 1211–1222.

Kauffman, J., Sanford Jr, R., Cummings, D., Salcedo, I., Sampaio, E., 1993. Biomass and nutrient dynamics associated with slash fires in neotropical dry forests. Ecology 74, 140–151.

Keel C.Y. 1975. Ecology of Azotobacter in Bamboo forest soil. Korean Journal of Microbiology, 13, 1-23.

Keithh, Mackey, B., Berry, S., Lindenmayer, D., Gibbons, P., 2010. Estimating carbon carrying capacity in natural forest ecosystems across heterogeneous landscapes: addressing sources of error. Global Change Biology 16, 2971–2989

Kilmer, V.J., Alexander, L.T., 1949. Methods of making mechanical analysis of soils. Soil Science. 58, 15–24.

Klotzbucher T, Kaiser K, Guggenberger G, Gatzek C, Kalbitz K., 2011. A new conceptual model for the fate of lignin in decomposing plant litter. Ecology 92 (5): 1052−1062

Koegel-Knabner I., 2002. The macromolecular organic composition of plant and microbial residues as inputs to soil organic matter. Soil Biology & Biochemistry, 34, 139-162.

Koppen, W., 1931. Grundriss der klimakunde. – De Gruyter, Berlin.

Korhonen R., K. Pingoud, I. Savolainen, and R. Matthews, 2002. The role of carbon sequestration and the tonne-year approach in fulfilling the objective of climate convention. Environmental Science & Policy, 5, 429–441.

Kramer C., and G. Gleixner, 2006. Variable use of plant- and soil-derived carbon by microorganisms in agricultural soils. Soil Biology & Biochemistry, 38, 3267–3278.

Kula E., 2010. Afforestation with carbon sequestration and land use policy in Northern Ireland. Land Use Policy, 27,749-752.

Laik R., Kumar, K., Das, D.K. and O.P. Chaturvedi, 2009. Labile soil organic matter pools in a calciorthent after 18 years of afforestation by different plantations. Applied Soil Ecology, 42, 71-78.

Lal R., 2005. Forest soils and carbon sequestration. Forest Ecology and Management, 220, 242–258.

Lal, M., and Singh, R., 2000. Carbon sequestration potential of Indian forests. Environmental Monitoring and Assessment 60, 315-327.

Lal, R., 2004. Soil carbon sequestration in India. Climatic Change 65, 277 – 296

Lesikar B., Hallmak, C., Melton, R. and B. Harris, 2005. On-site waste water treatment systems: Soil particle analysis procedure. Texas cooperative extension: The Texas A & M University system. pp.18.

Lettens S., Vos, B., Quataert, P., Wesemael, B. van, Muys, B. and J. Van Orshoven, 2007.Variable carbon recovery of Walkley-Black analysis and implications for national soil organic carbon accounting. European Journal of Soil Science, 58, 1244-1253.

Lewis, S.L., Lopez-Gonzalez, G., Sonke, B., Affum-Baffoe, K., Baker, T.R., Ojo, L.O., Phillips, O.L., Reitsma, J.M., White, L., Comiskey, J.A., Djuikouo, M.K., Ewango, C.E.N., Feldpausch, T.R., Hamilton, A.C., Gloor, M., Hart, T., Hladik, A., Lloyd, J., Lovett, J.C., Makana, J.R., Malhi, Y., Mbago, F.M., Ndangalasi, H.J., Peacock, J., Peh, K.S.H., Sheil, D., Sunderland, T., Swaine, M.D., Taplin, J., Taylor, D., Thomas, S.C., Votere, R., Wol, H., 2009. Increasing Carbon Storage in Intact African Tropical Forests. Nature 457, 1003 – 1007

Li Z., Fu, M. and D. Xu, 2003. Bamboo ecosystem and carbon dioxide sequestration. Journal of Bamboo Research, 22(4), 1-6.

Luyssaert, S., Schulze, E.D., Borner, A., Knohl, A., Hessenmoller, D., Law, BE, Ciais, P., Grace, J., 2008. Old-growth forests as global carbon sinks. Nature 455, 213 – 215

Mahaney, W.M., 2010. Plant controls on decomposition rates: the benefits of restoring abandoned agricultural lands with native prairie grasses. Plant and Soil 330, 91−101

Malhi Y, Phillips O., 2005. Tropical Forests and Global Atmospheric change, Oxford University Press, New York, 260p

Malhi, Y., 2010. The carbon balance of tropical forest regions, 1990–2005. Current Opinion in Environmental Sustainability 2, 237–244

Malhi, Y., Baldocchi, D.D., Jarvis, P.G., 1999. The carbon balance of tropical, temperate and boreal forests. Plant, Cell and Environment 22, 715–740

Mehta, N., Dinakaran, J., Patel, S., Laskar, A.H., Yadava, M.G., Ramesh, R., Krishnayya N.S.R., 2013. Changes in litter decomposition and soil organic carbon in a reforested tropical deciduous cover (India). Ecological Research 28, 239–248

Milne E., Adamat R.A., Batjes N.H., 2007. National and sub-national assessments of soil organic carbon stocks and changes: The GEFSOC modelling system. Agriculture, Ecosystems and Environment 122: 3–12.

Metcalfe D.B., 2014. A sink down under. Nature. 509: 566–567.

Monastersky, R., 2013. Global carbon dioxide levels near worrisome milestone. Nature 497, 13-14

Moorhead, D.L., Sinsabaugh, R.L., 2006. A theoretical model of litter decay and microbial interaction. Ecol Monogr 76 (2), 151−174

Morisada K., Ono, K. and H. Kanomata, 2004. Organic carbon stock in forest soils in Japan. Geoderma, 119, 21–32.

Niu X. and S.W. Duiker, 2006. Carbon sequestration potential by afforestation of marginal agricultural land in the Midwestern U.S. Forest Ecology and Management, 223,415-427.

Olschewski R. and P.C. Benıtez, 2010. Optimizing joint production of timber and carbon sequestration of afforestation projects. Journal of Forest Economics, 16, 1-10.

Olson J.S., 1963. Energy storage and the balance of producers and decomposers in ecological systems. Ecology 44 (2): 322−331

Pan Y., 2011. A Large and Persistent Carbon Sink in the World's Forests. Science 333, 988

Pande, P.K., 2005. Biomass and productivity in some disturbed tropical dry deciduous teak forests of Satpura plateau, Madhya Pradesh. Tropical Ecology 46(2), 229– 239

Patil, P., Singh, S., Dadhwal, V.K., 2012. Above Ground Forest Phytomass Assessment in Southern Gujarat. J Indian Soc Remote Sens 40(1), 37–46

Paudel S. and J.P Sah, 2003. Physiochemical characteristics of soil in tropical sal (Shroea robusta Gaert.) forests in eastern Nepal. Himalayan Journal of Sciences, 1(2), 107-110.

Paul, K.I., Polglase, P.J., Nyakuengama, J.G., Khanna, P.K., 2002. Change in soil carbon following afforestation. Forest Ecology and Management 168, 241−257

Paul, K.I., Polglase, P.J., Richards, G.P., 2003. Predicted change in soil carbon following afforestation or reforestation, and analysis of controlling factors by linking a C accounting model (CAMFor) to models of forest growth (3PG), litter decomposition (GENDEC) and soil C turnover (RothC). Forest Ecology and Management 177, 485−501

Pe´rez-Harguindeguy, N., Dı´az, S., Cornelissen, J.H.C., Vendramini, F., Cabido, M., Castellanos, A., 2000. Chemistry and toughness predict leaf litter decomposition rates over a wide spectrum of functional types and taxa in central Argentina. Plant and Soil 218, 21−30

Pendall, E., Bridgham, S., Hanson, P.J., Hungate, B., Kicklighter, D.W., Johnson, D,W., Law, B.E., Luo, Y., Megonigal, J.P., Olsrud, M., Ryan, M.G., Wan, S., 2004. Below-ground process responses to elevated CO_2 and temperature: a discussion of observations, measurement methods, and models. New Phytologist 162, 311–322

Piao, S., Fang, J., Ciasis, P., Peylin, P., Huang, Y., Sitch, S., Wang, T., 2009. The carbon balance of terrestrial ecosystems in China. Nature 458, 1009 – 1013

Pidwirny M. and J. Gulledge, 2009. "Carbon cycle." In: Encyclopedia of Earth. Eds. Cutler J. Cleveland (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment).

Post, W.M., Kwon, K.C., 2000. Soil carbon sequestration and land-use change: processes and potential. Global Change Biology 6, 317−327

Potter C., Klooster, S., Hiatt, S., Fladeland, M., Genovese, V. and G. Peggy, 2007.Satellite-derived estimates of potential carbon sequestration

through afforestation of agricultural lands in the United States. Climatic Change, 80, 323-336.

Poulter B, Frank D, Ciais P et al., 2014. Contribution of semi-arid ecosystems to interannual variability of the global carbon cycle. Nature, 509, 600–604.

Ravindranath, N.H., Chaturvedi, R.K., Murthy, I.K., 2008. Forest conservation, afforestation and reforestation in India: Implications for forest carbon stocks. Current Science 95 (2), 216 – 222

Ravindranath, N.H., Somashekhar, B.S., Gadgil, M., 1997. Carbon flow in Indian forests. Climatic Change 35, 297 – 320

Ravindranath, N.H., Sudha, P., Rao, S., 2001. Forestry for sustainable biomass production and carbon sequestration in India. Mitigation and Adaptation Strategies for Global Change 6, 233 – 256

Reichstein M, Bahn M, Ciais et al., 2013. Climate extremes and the carbon cycle. Nature, 500, 287–295.

Reimer, P.J., Baillie, M.G.L., Bard, E., Bayliss, A., Beck, J.W., Blackwell, P.G., Brong Ramsey, C., Bucks, C.E., Burr, G.S., Edwards, R.L., Friedrich, M., Grootes, P.M., Guilderson, T.P., Hajdas, I., Heatons, T.J., Hogg, A.G., Hughen, K.A., Kaiser, K.F., Kromer, B., McCormac, F.G., Manning, S.W., Reimer, R.W., Richards, D.A., Southon, J.R., Talamo, S., Turney, C.S.M., Vander Plicht, J., Weyhenmeyer, C.E., 2009. Intcal09 and marine09 radiocarbon age calibration curves, 0–50,000 years cal BP. Radiocarbon. 51 (4), 1111−1150.

Richards, A.E., Dalal, R.C., Schmidt, S., 2007. Soil carbon turnover and sequestration in native subtropical tree plantations. Soil Biol & Biochem 39, 2078–2090

Richards, J.F., and Flint, E.P., 1991. Historic land use and carbon estimates for South and Southeast Asia 1880-1980. ORNL/CDIAC-61, NDP-046. Oak Ridge National Laboratory, Tennessee, USA, 326pp.

Richter D.D., Markewitz, D., Trumbore, S.E. and C.G. Wells, 1999. Rapid accumulation and turnover of soil carbon in a re-establishing forest. Nature, 400, 56-58.

Russell A.E., Raich, J.W., Valverde-Barrantes, O.J. and R.F.Fisher, 2007. Tree species effects on soil properties in experimental plantations in tropical moist forests. Soil Science Society of America Journal, 71(4), 1389-1397.

Saatchi S, Asefi-Najafabady S, Malhi Y et al., 2013. Persistent effects of a severe drought on Amazonian forest canopy. PNAS, 110 (2), 565–570.

Saatchi, S.S., Nancy, L., Harris, Brown, S., Lefsky, M., Mitchard, E.T.A., Salas, W., Zutta, B.R., Buermann, W., Lewis, S.L., Hagen, S., Petrova, S., White, L., Silman, M., Morel, L., 2011. Benchmark map of forest carbon stocks in tropical regions across three continents. PNAS 108 (24), 9899-9904

Salinas N, Malhi Y, Meir P, Silman M, Cuesta RR, Huaman J, Salinas D, Huaman V, Gibaja A, Mamani M, Farfan F., 2011. The sensitivity of tropical leaf litter decomposition to temperature: results from a large –scale leaf translocation experiment along an elevation gradient in Peruvian forests. New Phytol 189: 967−977

Santiago L.S., 2007. Extending the leaf economics spectrum to decomposition: evidence from a tropical forest. Ecology 88 (5): 1126−1131

Sayer E.J., Powers, J.S., and E.V.J. Tanner, 2007. Increased litterfalll in tropical forests boosts the transfer of soil CO2 to atmosphere. PLoS ONE, 12, e1299.

Schlesinger W.H, 1991. Biogeochemistry: An Analysis of Global Change. Academic Press, London.

Schlesinger W.H., 1990. Evidence from chronosequence studies for a low carbon storage potential of soils. Nature, 348, 232-234.

Schmidt, M.W.I., Torn, M.S., Abiven, S., Dittmar, T., Guggenberger, G., Janssens,

I.A., Kleber, M., Kogel-Knabner, I., Lehmann, J., Manning, D.A.C., Nannipieri, P., Rasse, D.P., Weiner, S., Trumbore, S.E., 2011. Persistence of soil organic matter as an ecosystem property. Nature 478, 49−56

Schulp CJE, Nabuurs GJ, et al., 2008. Effect of tree species on carbon stocks in forest floor and mineral soil and implications for soil carbon inventories. Forest Ecology and Management 256 (2008) 482–490.

Schumacher B.A., 2002. Methods for the determination of total organic carbon (TOC) in soils and sediments, Ecological Risk Assessment Support Center Office of Research and Development US. Environmental Protection Agency, pp.23.

Schwendenmann, L. Pendall, E., 2008. Response of soil organic matter dynamics to conversion from tropical forest to grassland as determined by long-term incubation. Biology & Fertility of Soils 44, 1053 – 1062

Sharma E., Bhuchar S., et al., 2011. Land use change and its impact on hydro-ecological linkages in Himalayan watersheds. Tropical Ecology 48(2): 151-161.

Shi H, Singh A., 2002. An assessment of biodiversity hotspots using Remote Sensing and GIS. J. Indian Soc Remote Sensing 30 (1&2): 105–112

Shukla P.K., 2009. Nutrient dynamics of Teak plantations and their impact on soil productivity - A case study from India, XIII World Forestry Congress Buenos Aires, Argentina, 18 – 23 October, 1-11.

Singh O, Sharma DC, Rawat JK., 1993. Production and decomposition of leaf litter in SAL, Teak, Eucalyptus and Poplar forests in utter Pradesh. Indian Forester 112−121

Singh, A., Unnikrishnan, S., Naik, N., Duvvuri, K., 2013. Role of India's forests in climate change mitigation through the CDM and REDD+. Journal of Environmental Planning and Management 56 (1), 61–87

Skaggs T.H., Arya, L.M., Shouse, P.J. and B.P. Mohanty, 2001. Estimating particle-size distribution from limited soil texture data. Soil Science Society of America Journal, 65, 1038-1044.

Slik, J.W.F., Aiba, S.I., Brearley, F.Q., Cannon, C.H., Forshed, O., Kitayama, K., Nagamasu, H., Nilus, R., Payne, J., Paoli, G., Poulsen, A.D., Raes, N., Sheil, D., Sidiyasa, K., Suzuki, E., Van Valkenburg, J.L.C.H., 2010. Environmental correlates of tree biomass, basal area, wood specific gravity and stem density gradients in Borneo's tropical forests. Global Ecology and Biogeography 19, 50–60

Smith P., Smith J., et al., 2005. Projected changes in mineral soil carbon of European forests, 1990–2100. Can. J. Soil. Sci. 159–169.

Smitha C.K., Oliveirab A., et al., 2002. Soil carbon stocks after forest conversion to tree plantations in lowland Amazonia, Brazil. Forest Ecology and Management 164: 257–263.

Takahashi S., Nakagami, K., Sakanoue, S., Itano, S. and H. Kitita, 2007. Soil organic carbon storage in grazing pasture converted from forest on Andosol soil. Grassland Science, 53, 210-216.

Thomey, M.L., Scott, L., Colli, N.S., Vargasw, R., Johnson, J.E., Brown, R.F., Natvig, D.O., Ens, M.F., 2011. Effect of precipitation variability on net primary production and soil respiration in a Chihuahuan Desert grassland. Global Change Biology 17, 1505–1515

UNFCCC, http://unfccc.int/kyoto_protocol/items/2830.php

Usuga J.C.L., Torob, J.A.R., Alzateb, M.V.R., and Á. J. L. Tapiasc, 2010. Estimation of biomass and carbon stocks in plants, soil and forest floor in different tropical forests. Forest Ecology and Management, 260, 1906-1913.

Volume equations for forests of India, Nepal and Bhutan. Forest Survey of India (FSI), Ministry of Environment and Forests, Government of India, 1996, Published by Director FSI, Dehradun

Walkley, A., Black, I.A., 1934. An examination of the Degtjareff method for determining soil organic matter and proposed modifications of the chromic acid titration method. Soil Sci 37, 29−38

Wang Y, Hsieh YP., 2002. Uncertianities and prospects in the study of the soil carbon dynamics. Chemosphere 49: 791−804

West K., 2008. Essential chemistry: Carbon chemistry, Chelsea House An imprint of Infobase Publishing 132 West 31st Street New York NY 10001, pp.117.

Witt, C., Gaunt, J.L., Glaicia, C.C., Ottow, J.C.G., Neue, H.U., 2000. A rapid chloroform-fumigation extraction method for measuring soil microbial biomass carbon and nitrogen in flooded rice soils. Biology and Fertility of Soil. 30, 510−519.

Yang X, Tang J, Mustard JF et al., 2015. Solar-induced chlorophyll fluorescence that correlates with canopy photosynthesis on diurnal and seasonal scales in a temperate deciduous forest. Geophysical Res. Lett., 42, 1–11.

Yang, K., Zhu, J., Zhang, M., Yan, Q., Sun, O.J., 2010. Soil microbial biomass carbon and nitrogen in forest ecosystems of Northeast China: a comparison between natural secondary forest and larch plantation. Journal of Plant Ecology 3 (3), 175–182

Yang, Y., Luo, Y., Finzi, A.C., 2011. Carbon and nitrogen dynamics during forest stand development: a global synthesis. New Phytologist 190, 977–989

Zhang X., and D. Xu, 2003. Potential carbon sequestration in china's forests. Environmental Science and Policy , 6, 421-432.

Zhang, D., Hui, D., Luo, Y., Zhou, G., 2008. Rates of litter decomposition in terrestrial ecosystems: global patterns and controlling factors. J Plant Ecol 1 (2), 85−93